

Amendment dated April 17, 2006
Reply to Office Action of 02/10/2006

Title of the Invention

A machine for piercing sheets of material in a variety of patterns using an adjustable apparatus

Cross Reference to Related Applications

This application is based on provisional application serial number 60/426,141, filed on November 13, 2002.

Statement Regarding Federally Sponsored Research or Development

Not Applicable

Description of Attached Appendix

Not Applicable

Background of the Invention

This invention relates generally to the field of punching and more specifically to a machine for piercing sheets of material in a variety of patterns using an adjustable apparatus.

The use of hand actuated paper punches has a long history of use both for business and for various types of arts and crafts. Paper punches are used to form shapes in paper by cutting away a section of the paper using a cutting die designed to make a smooth cut and further designed with a specific geometry for that cut. Along with the cutting die, paper punches use a matching hole on the other side of the paper being

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punched to allow the cutting die to pass completely through the paper while the hole and base of the frame with the hole hold and support that paper. The hole must be closely matched to the size and geometry of the cutting die to provide for a smooth cut. In addition, the cutting die must be manufactured with a set of edges that form the cutting surface and are located at an angle to the paper being punched to also insure a smooth cut.

The initial use for paper punching was to punch circular holes in paper that was then mounted in binders with a corresponding rings to hold that paper. Such binders usually with three rings to hold the paper are in wide use throughout the world in business. Similar punches are used in schools to compile the work pages of students.

Soon various artists realized that the cutting die or paper punches could be designed in various geometries and shapes to form special cutouts such as stars, circles and a myriad of other shapes and items. Currently there are a large variety of decorative paper punches used in a number of arts and crafts.

The configuration of the punch itself changed. Initially, paper punches looked much like a pair of pliers where the mechanism was held in the hand and paper placed between the cutting die and the base and then the handles squeezed to punch the paper. A spring was placed between the handles to return the punch to the open position when the punching operation was completed. Three hole punches often used a lever to allow the user to push down on that lever and move the three cutting dies down and punch